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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Goran Sundholm

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EXAMINER

KIM, CHRISTOPHER S

ART UNIT

PAPER NUMBER

3752

MAIL DATE

DELIVERY MODE

05/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,770	Applicant(s) SUNDHOLM, GORAN	
	Examiner Christopher S. Kim	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The response filed February 4, 2008 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention appears to cover two statutory classes. Claim 1 recites "In a method of a fire extinguishing spraying apparatus..." The claim is directed to a process and an apparatus.

Claim Rejections - 35 USC § 112

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "In a method of a fire extinguishing spraying apparatus..." It is uncertain whether claim 1 is directed to a process or an apparatus. It is uncertain how "a fire extinguishing spraying apparatus" can be a method.

Claim Rejections - 35 USC § 102

6. Claims 1-6, 9, 11-13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kirkelund et al. (4,941,505).

In claim 1:

Kirkelund discloses an apparatus comprising:

a source of medium 16;

a pump means 12;

means for passing

at least one nozzle 28;

re-circulating at least some of the medium (medium flowing through 18 and 40) which is not passed to the nozzle 28 back to a suction side of the pump means 12 (through line having check valve leading from return line 41 to the suction side of pump 12);

passing at least some of the medium re-circulating into a discharge pipe 41 (leading back to supply 16) and not the pump means 12.

The recitation “In a method of a fire extinguishing spraying apparatus” in the preamble is merely a name of the spraying apparatus. The name “fire extinguishing spraying apparatus” does not breathe life and meaning to the claim. The body of the claim fails to define any fire fighting steps. Applicant’s device too is not a fire extinguishing spraying apparatus until it actually extinguishes fire. Until then, it is merely a name which indicates intended use. In Kirkelund’s device, the intended use

can be a “fire extinguishing spraying apparatus” by preventing oil drip and cutting off the supply of fuel. The burner of Kirdelund can be used to power a fire extinguishing device, e.g., the burner used to power a steam engine that powers a water pump.

In claim 2:

Kirkelund further discloses the flow into the discharge pipe 41 is restricted (through orifice 40 and opening size of valve 18).

In claim 3:

Kirkelund discloses that at least some of the medium being re-circulated is passed into the discharge pipe 41. Therefore, it also performs the function at some set temperature. Applicant's claimed invention does not prevent passing some of the re-circulated medium into the discharge pipe outside of the set temperature.

In claim 4:

Kirkelund discloses that passage into the discharge pipe 14 is opened and/or closed by means of a valve element 18, 19. The valve 18, 19 is a pressure regulator. Since pressure and temperature are related parameters, the regulator 18, 19 is indirectly based on temperature.

In claim 5:

Kirkelund discloses the flow rate of the medium being re-circulated is reduced when the flow rate of the extinguishing medium to the nozzles 28 is increased (inherently performed by regulator 18, 19).

In claim 6:

Kirkelund discloses the flow rate of the medium being re-circulated is increased when the flow rate of the extinguishing medium to the nozzles 28 is reduced (inherently performed by regulator 18, 19).

In claim 9:

Kirkelund discloses an apparatus comprising:

- a source of medium 16;

- a pump means 12;

- means for conducting (line having valve 14);

- at least one nozzle 28;

- means (line having check valve leading from return line 41 to the suction side of pump 12) for re-circulating at least some of the medium from a pressure side of the pump means 12 to a suction side of the pump means 12;

- means (branch in line 41 leading to supply 16) for passing at least some of the medium being re-circulated into a discharge pipe 41 (discharge pipe 41 leading to supply 16).

The recitation “In a fire extinguishing spraying apparatus” in the preamble is merely a name of the spraying apparatus. The name “fire extinguishing spraying apparatus” does not breathe life and meaning to the claim. The body of the claim fails to define any fire extinguishing limitations. Applicant’s device too is not a fire extinguishing spraying apparatus until it actually extinguishes fire. Until then, it is merely a name which indicates intended use. In Kirkelund’s device, the intended use can be a “fire extinguishing spraying apparatus” by preventing oil drip and cutting off the

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supply of fuel. The burner of Kirdelund can be used to power a fire extinguishing device, e.g., the burner used to power a steam engine that powers a water pump.

In claim 11:

Kirkelund discloses the means for re-circulating comprises:

a passage (line have valve 18, 19 and line having check valve leading from return line 41 to the suction side of pump 12);

a pressure valve 18, 19.

In claim 12:

Kirkelund discloses a valve element 18, 19.

In claim 13:

Kirkelund discloses a means (regulator 19) for opening and/or closing the valve element 18. The regulator 19 is a pressure regulator. Since pressure and temperature are related parameters, the regulator 19 is indirectly based on temperature.

In claim 16:

Kirkelund discloses a check valve (check valve in line going form line 41 to suction side of pump 12).

7. Claims 1-6, 9, 11-13, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Worthington (5,398,765).

Worhtington discloses a fire extinguishing spraying apparatus comprising:

a source 16 of a medium;

a pump means 34;

a means 44 for passing at least a proportion of the medium to at least one nozzle 50;

re-circulating at least some of the medium (via valve 74);

passing at least some of the medium re-circulated into a discharge pipe

28.

Worhtington's valve 105 is a pressure regulating valve. Therefore, it inherently is controlled based on temperature because there is an inherent relationship between fluid pressure and temperature.

Claim Rejections - 35 USC § 103

8. Claims 8, 10, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkelund et al. (4,941,505).

Regarding claim 10, Kirkelund discloses the limitations of the claimed invention with the exception of the pump means 12 being a constant volume pump or a piston pump. Constant volume pumps and/or piston pumps are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a constant volume pump or a piston pump for the pump means 12 in the device of Kirkelund to reduce cost by using existing well proven components.

Regarding claim 8 and 14, Kirkelund discloses the limitations of the claimed invention with the exception of the pump means 12 being a 1-300 bar pressure pump. 1-300 bar pressure pumps are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a 1-300

bar pressure pump in the device of Kirkelund to reduce cost by using existing well proven components.

Regarding claim 15, Kirkelund discloses the claimed invention with the exception of the discharge pipe (line 41 leading to supply 16) being provided with a throttle element. Kirkelund discloses a throttle element 40. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have provided a throttle element in the section of line 41 leading to supply 16 in the device of Kirkelund to reduce the flow to the supply 16 thereby increasing re-circulation.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkelund et al. (4,941,505) in view of Ahern et al. (6,520,767).

Kirkelund discloses the limitations of the claimed invention with the exception of the medium being a water based liquid. Ahern teaches a water/hydrocarbon fuel mixture. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used the water/hydrocarbon fuel mixture of Ahern in the device of Kirkelund to reduce undesirable emission (Ahern, column 1, lines 15-30).

10. Claims 7, 8, 10, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worthington (5,398,765).

Regarding claim 7, Worthington discloses the limitations of the claimed invention with the exception of the foam concentrated being a water based liquid. Water based foam concentrates are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a water based foam concentrate in the device of Worthington to increase miscibility.

Regarding claims 8 and 14, Worthington discloses the limitations of the claimed invention with the exception of the medium being recirculated at 1-300 bar. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have recirculated the foam concentrate at 1-300 bar in the device of Worthington for proper proportioning with the water.

Regarding claim 10, Worthington discloses the limitations of the claimed invention with the exception of the pump means being a constant-volume pump or a piston pump. Constant volume pump or piston pump is well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used a constant volume pump or a piston pump in the device of Worthington to reduce cost by utilizing existing equipment.

Regarding claim 16, Worthington discloses the limitations of the claimed invention with the exception of the check valve. Check valves are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have placed a check valve in the passage of Worthington to prevent backflow and ensure flow in one direction.

Response to Arguments

11. Applicant's arguments filed February 4, 2008 have been fully considered but they are not persuasive.

Applicant raises no new issue.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/
Primary Examiner, Art Unit 3752

CK